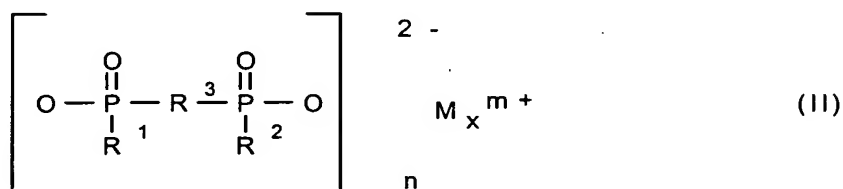
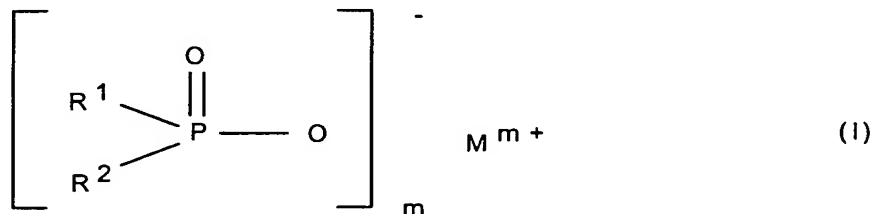


What is claimed is:

1. A flame retardant-stabilizer combination for thermoplastic polymers, comprising, as component A, from 25 to 99.9% by weight of a phosphinic acid salt of the formula (I) and/or of a diphosphinic acid salt of the formula (II) and/or polymers thereof



10 where

R^1, R^2 are the same or different and are each $\text{C}_1\text{-C}_6$ -alkyl, linear or branched, and/or aryl;

R^3 is $\text{C}_1\text{-C}_{10}$ -alkylene, linear or branched, $\text{C}_6\text{-C}_{10}$ -arylene, -alkylarylene or -arylalkylene;

15 M is Mg, Ca, Al, Sb, Sn, Ge, Ti, Zn, Fe, Zr, Ce, Bi, Sr, Mn, Li, Na, K and/or a protonated nitrogen base;

m is from 1 to 4;

n is from 1 to 4;

x is from 1 to 4,

20 as component B, from 0 to 75% by weight of a nitrogen-containing synergist or of a phosphorus/nitrogen flame retardant and,

as component C, from 0.1 to 50% by weight of magnesium oxide, zinc oxide, manganese oxide, tin oxide, dihydrotalcite, hydrocalumite, magnesium hydroxide, calcium hydroxide, zinc hydroxide, tin oxide hydrate, manganese hydroxide, zinc

borate, basic zinc silicate, zinc stannate or mixtures of these substances, the sum of the components always being 100% by weight.

2. A flame retardant-stabilizer combination as claimed in claim 1, wherein R^1 , R^2
5 are the same or different and are each C_1 - C_6 -alkyl, linear or branched, and/or phenyl.
3. A flame retardant-stabilizer combination as claimed in claim 1 or 2, wherein
10 R^1 , R^2 are the same or different and are each methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, n-pentyl and/or phenyl.
4. A flame retardant-stabilizer combination as claimed in one or more of claims 1
to 3, wherein R^3 is methylene, ethylene, n-propylene, isopropylene, n-butylene, tert-
butylene, n-pentylene, n-octylene or n-dodecylene; phenylene or naphthylene;
15 methylphenylene, ethylphenylene, tert-butylphenylene, methylnaphthylene, ethylnaphthylene or tert-butyl naphthylene; phenylmethylene, phenylethylene, phenylpropylene or phenylbutylene.
5. A flame retardant-stabilizer combination as claimed in one or more of claims 1
20 to 4, wherein M is a calcium, aluminum or zinc ion.
6. A flame retardant-stabilizer combination as claimed in one or more of claims 1
to 5, wherein component B comprises condensation products of melamine.
- 25 7. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 6, wherein the condensation products of melamine are melem, melam, melon and/or more highly condensed compounds thereof.
8. A flame retardant-stabilizer combination as claimed in one or more of claims 1
30 to 5, wherein component B comprises reaction products of melamine with polyphosphonic acid and/or reaction products of condensation products of melamine with polyphosphonic acid or mixtures thereof.

9. A flame retardant-stabilizer combination claim 8, wherein the reaction products are dimelamine pyrophosphate, melamine polyphosphate, melem polyphosphate, melam polyphosphate, melon polyphosphate and/or mixed polysalts of this type.

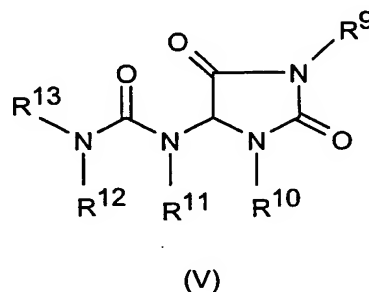
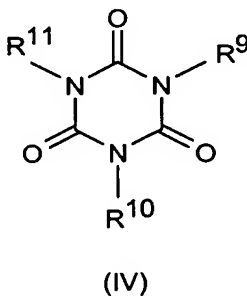
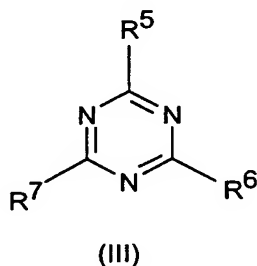
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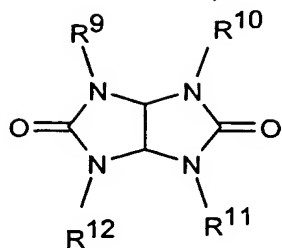
10. A flame retardant-stabilizer combination claim 9, wherein component B is melamine polyphosphate.

11. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 5, wherein the phosphorus/nitrogen flame retardants are nitrogen-containing phosphates of the formulae $(\text{NH}_4)_y \text{H}_{3-y} \text{PO}_4$ or $(\text{NH}_4 \text{PO}_3)_z$, where y is from 1 to 3 and z is from 1 to 10 000.

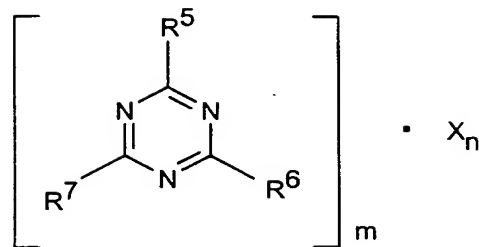
12. A flame retardant-stabilizer combination as claimed in claim 11, wherein the phosphorus/nitrogen flame retardants are ammonium hydrogenphosphate, ammonium dihydrogenphosphate and/or ammonium polyphosphate.

13. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 5, wherein the nitrogen-containing synergists are those of the formulae (III) to (VIII) or mixtures thereof.

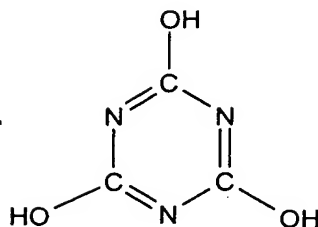
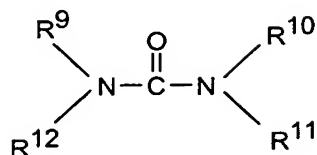




(VI)



(VII)



(VIII)

5 where

R^5 to R^7 are each hydrogen, C_1 - C_8 -alkyl, C_5 - C_{16} -cycloalkyl or -alkylcycloalkyl, possibly substituted by a hydroxyl or a C_1 - C_4 -hydroxyalkyl function, C_2 - C_8 -alkenyl, C_1 - C_8 -alkoxy, -acyl, -acyloxy, C_6 - C_{12} -aryl or -arylalkyl, - OR^8 and - $N(R^8)R^9$, N-alicyclic or N-aromatic,

10 R^8 is hydrogen, C_1 - C_8 -alkyl, C_5 - C_{16} -cycloalkyl or -alkylcycloalkyl, possibly substituted by a hydroxyl or a C_1 - C_4 -hydroxyalkyl function, C_2 - C_8 -alkenyl, C_1 - C_8 -alkoxy, -acyl, -acyloxy or C_6 - C_{12} -aryl or -arylalkyl,

R^9 to R^{13} are each the same groups as R^8 and also - $O-R^8$,

m and n are each independently of 1, 2, 3 or 4,

15 X is an acid which can form adducts with triazine compounds (III); or oligomeric esters of tris(hydroxyethyl) isocyanurate with aromatic polycarboxylic acids.

14. A flame retardant-stabilizer combination as claimed in one or more of claims 1
20 to 5, wherein the nitrogen-containing synergists are benzoguanamine, tris(hydroxyethyl) isocyanurate, allantoin, glycoluril, melamine, melamine cyanurate, dicyandiamide and/or guanidine.

15. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 14, which comprises carbodiimides.

16. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 15, wherein component C is magnesium oxide, zinc oxide, manganese oxide and/or tin oxide.

17. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 15, wherein component C is dihydrotalcite, hydrocalumite, magnesium hydroxide, calcium hydroxide, zinc hydroxide, tin oxide hydrate, manganese hydroxide, zinc borate, basic zinc silicate or zinc stannate.

18. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 17, wherein from 50 to 90% by weight of component A, from 0 to 50% by weight of component B and from 1 to 20% by weight of component C are present.

19. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 18, wherein from 50 to 80% by weight of component A, from 20 to 50% by weight of component B and from 2 to 20% by weight of component C are present.

20. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 17, wherein from 60 to 98% by weight of component A and from 2 to 40% by weight of component C are present.

21. A flame-retardant plastics molding composition, comprising a flame retardant-stabilizer combination as claimed in one or more of claims 1 to 20.

22. A flame-retardant plastics molding composition as claimed in claim 21, wherein the plastics used are thermoplastic polymers of the type high-impact polystyrene, polyphenylene ether, polyamides, polyesters, polycarbonates and blends or polymer blends of the type ABS (acrylonitrile-butadiene-styrene) or PC/ABS (polycarbonate/acrylonitrile-butadiene-styrene) or PPE/HIPS (polyphenylene ether/HI polystyrene) plastics.

23. A flame-retardant plastics molding composition as claimed in claim 21 or 22, wherein the plastics are polyamides, polyesters and PPE/HIPS blends.

5 24. A flame-retardant plastics molding composition as claimed in one or more of claims 21 to 23, which comprises the flame retardant-stabilizer combination in an amount of from 2 to 50% by weight %, based on the plastics molding composition.

10 25. A flame-retardant plastics molding composition as claimed in one or more of claims 21 to 24, which comprises the flame retardant-stabilizer combination in an amount of from 10 to 30% by weight, based on the plastics molding composition.

15 26. A flame-retardant plastics molding composition as claimed in one or more of claims 21 to 24, which comprises the flame retardant-stabilizer combination having the composition as claimed in claim 20.

27. A polymer shaped body, film, thread or fiber comprising a flame retardant-stabilizer combination as claimed in one or more of claims 1 to 20.

20 28. A polymer shaped body, film, thread or fiber as claimed in claim 27, wherein the polymers are high-impact polystyrene, polyphenylene ethers, polyamides, polyesters, polycarbonates and blends or polymer blends of the type ABS (acrylonitrile-butadiene-styrene) or PC/ABS (polycarbonate/acrylonitrile-butadiene-styrene), polyamide, polyester and/or ABS.

25

29. A polymer shaped body, film, thread or fiber as claimed in claim 27 or 28, which comprises the flame retardant-stabilizer combination in an amount of from 2 to 50% by weight, based on the polymer content.

30 30. A polymer shaped body, film, thread or fiber as claimed in one or more of claims 27 to 29, which comprises the flame retardant-stabilizer combination in an amount of from 10 to 30% by weight, based on the polymer content.

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31. A polymer shaped body, film, fiber or thread after after one or more of claims 27 to 29, which comprises the flame retardant-stabilizer combination having the composition as claimed in claim 15.

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